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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,235	09/04/2003	Fausto Casaro	02-41 US	5686
23693	7590	03/31/2009	EXAMINER	
Varian Inc. Legal Department 3120 Hansen Way D-102 Palo Alto, CA 94304			CHANG, RICK KILTAE	
			ART UNIT	PAPER NUMBER
			3726	
			MAIL DATE	DELIVERY MODE
			03/31/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/655,235

**Applicant(s)**

CASARO, FAUSTO

**Examiner**

Rick K. Chang

**Art Unit**

3726

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 5-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3 and 5-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure, as originally filed, failed to provide support for “during the first forging step, said workpiece is . . . . application of forces” (claim 1, lines 12-13).

3. A claim that omits an element (“generally” in claim 1, line 5) which applicant describes as an essential or critical feature of the invention originally disclosed does not comply with the written description requirement. See *Gentry Gallery*, 134 F.3d at 1480, 45 USPQ2d at 1503; *In re Sus*, 306 F.2d 494, 504, 134 USPQ 301, 309 (CCPA 1962).

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 3 and 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are numerous phrases and clauses in the claims that are vague, indefinite, and/or awkwardly and confusingly worded, and therefore, are not fully understood. The following are examples:

“at least one sets” should be “at least one set”.

Is “axial compression” in claim 1, line 12 referring to “an axial compression” or something else?

Claims are ambiguous and competitors would be unable to discern the bounds of the invention.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 7, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shighihara et al (US 6,094,815) in view of Sun (US 5,507,617), and further in view of Askey et al (US 4,860,567).

Shighihara discloses a workpiece comprising a bar (S1 says "cut bar into billet"); forging (S4) to form the cylindrical body being a semi-finished part having a homogenous mechanical properties (col. 4, lines 50-53); 10 and 20 (they have the same diameter; 50 has the same diameter as 10 and 20) prevent the workpiece, the bar, from radial expansion; 80 and 22 form cavities while the workpiece is prevented from its radial expansions by a mold 20 (col. 4, lines 31-45); polishing the cavities (col. 4, lines 11-13).

Shigihara fails to disclose milling the vanes and next forging said workpiece to form a cavity within said cylindrical body, by means of a punch, providing an axial compression, that is forced into the billet while a radial expansion is prevented by an application of forces.

Sun discloses milling the vanes (col. 5, lines 41-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shigihara by milling the vanes, as taught by Sun, for the purpose of removing unwanted burrs and imperfections from the vanes to meet the desired design characteristics.

Askey discloses next forging said workpiece to form a cavity within said cylindrical body, by means of a punch, providing an axial compression, that is forced into the billet while a radial expansion is prevented by an application of forces (subsequently forging forming a cavity (Fig. 2) within said cylindrical body being a cylindrical billet (10) by means of a punch (20 providing an axial compression) that is forced into the billet, while preventing at the same time radial expansions of the billet through confinement in a mold (a radial expansion is prevented by an application of forces by 30)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shigihara/Sun/Papst by next forging said workpiece to form a cavity within said cylindrical body, by means of a punch that is forced into the billet to the Shigihara/Sun/Papst, as taught by Askey, for the purpose of forming the blind cavity in the billet without requiring additional processing steps.

8. Claims 3 and 5, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigihara et al (US 6,094,815)/Sun (US 5,507,617)/Askey et al (US 4,860,567) as applied to claim 1 above, and further in view of Papst et al (US 3,786,290).

Re claim 3: Shigihara/Sun/Askey fail to disclose a bell-shaped rotor.

Papst discloses a bell-shaped rotor (14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shigihara/Sun/Askey by forming a bell-shaped rotor to the Shigihara/Sun, as taught by Papst, for the purpose of forming a cage to carry impeller blades.

Re claim 5: Shigihara discloses in col. 4, lines 6-8 refining by subsequent mechanical working. Askey discloses extending said cavity over a part of said cylindrical billet (Fig. 2).

9. Claim 6, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Shigihara et al (US 6,094,815)/Sun (US 5,507,617)/Papst et al (US 3,786,290)/Askey et al (US 4,860,567) as applied to claims 1, 3 and 5 above, and further in view of Parizek (US 4,789,410).

Papst discloses forming a central bore (where 11 is going thru 14) on a bottom of the cavity (where 11 lies), except for subsequently performing a thermal treatment.

Parizek discloses performing a thermal treatment (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shigihara/Sun/Papst/Askey by subsequently performing a thermal treatment to the Shigihara/Sun/Papst/Askey, as taught by Parizek, for the purpose of establishing metallurgical and mechanical properties.

***Response to Arguments***

10. Applicant's arguments filed 1/15/09 have been fully considered but they are not persuasive.

The argument is moot since there are only three (3) references, instead of four (4) references.

#### ***Interviews After Final***

11. Applicant note that an interview after a final rejection must be submitted briefly in writing the intended purpose and content of the interview (the agenda of the interview must be in writing). Upon review of the agenda, the Examiner may grant the interview if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

#### ***Conclusion***

12. Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity (optional). Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (571) 272-4564. The examiner can normally be reached on 5:30 AM to 1:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rick K. Chang/  
Primary Examiner, A.U. 3726

RC  
March 31, 2009